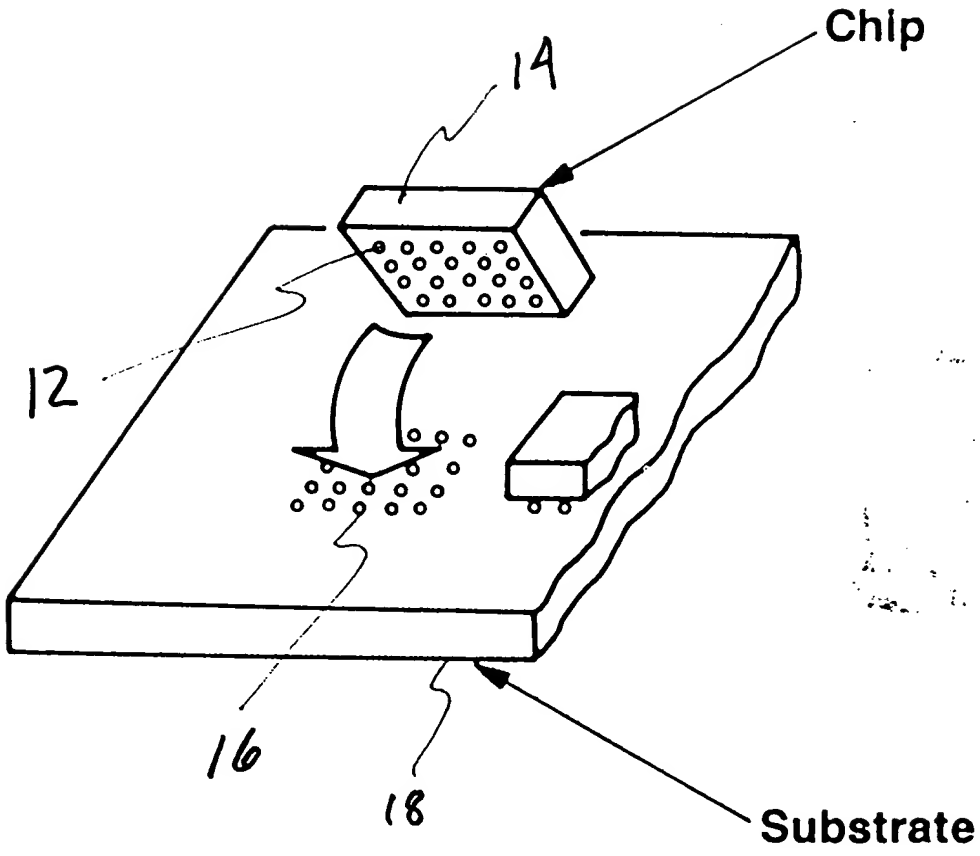
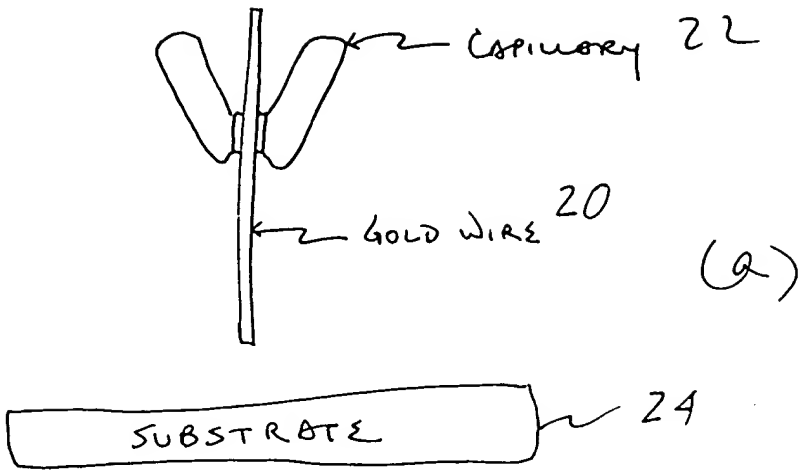
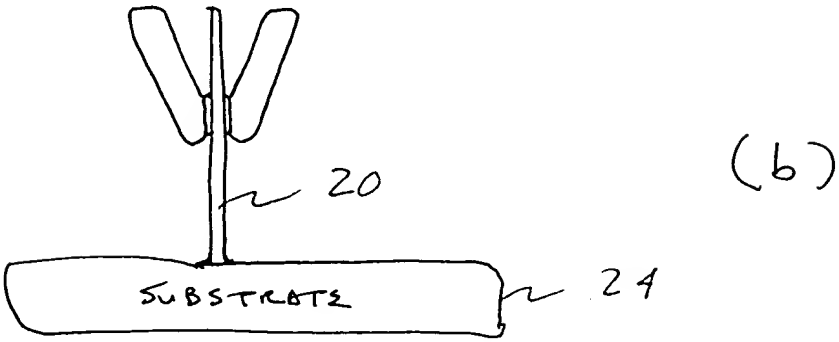
FIGURE 1

(PRIOR ART)







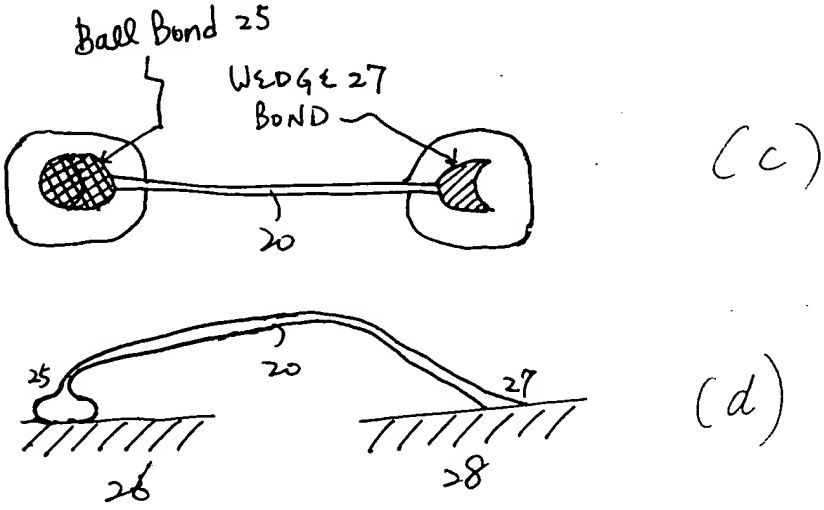


FIGURE 2

(PRIOR ART)

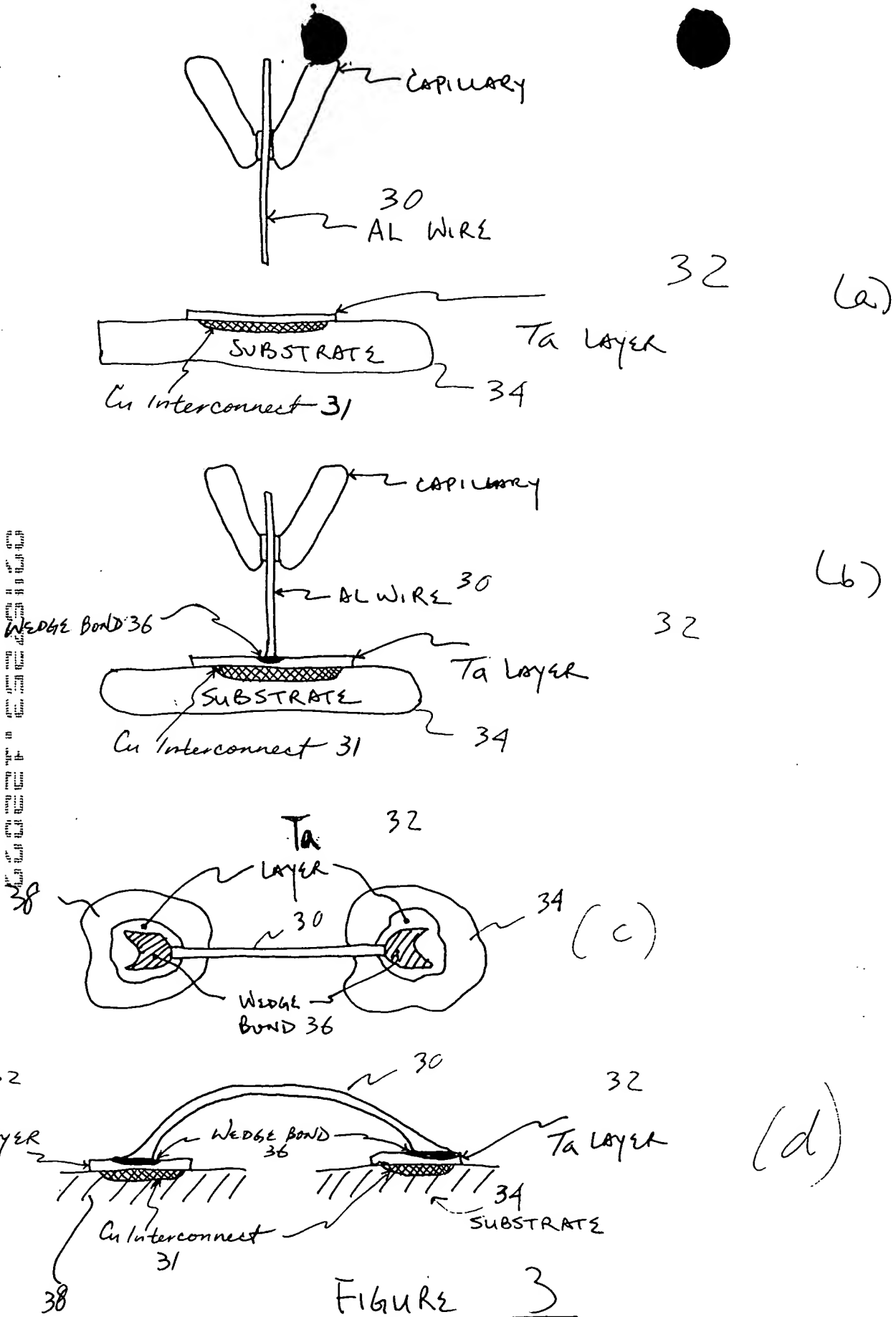

CAPILLARY
30
AL WIRE
32
(a)
Ta LAYER
SUBSTRATE
34
Cu Interconnect 31
CAPILLARY
AL WIRE 30
(b)
WEDGE BOND 36
32
Ta LAYER
SUBSTRATE
34
Cu Interconnect 31
Ta
32
LAYER
38
34
30
(c)
WEDGE BOND 36
30
32
32
(d)
Ta LAYER
WEDGE BOND 36
Ta LAYER
34
SUBSTRATE
Cu Interconnect 31
38

FIGURE 3

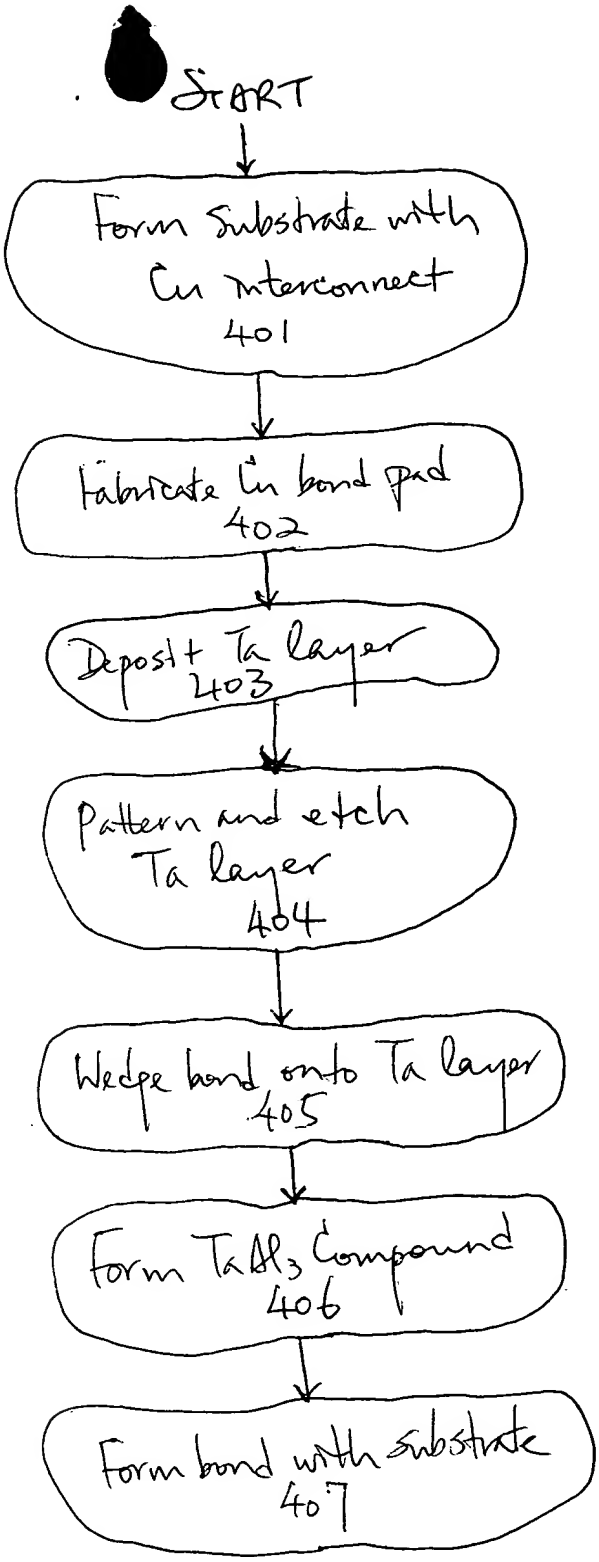
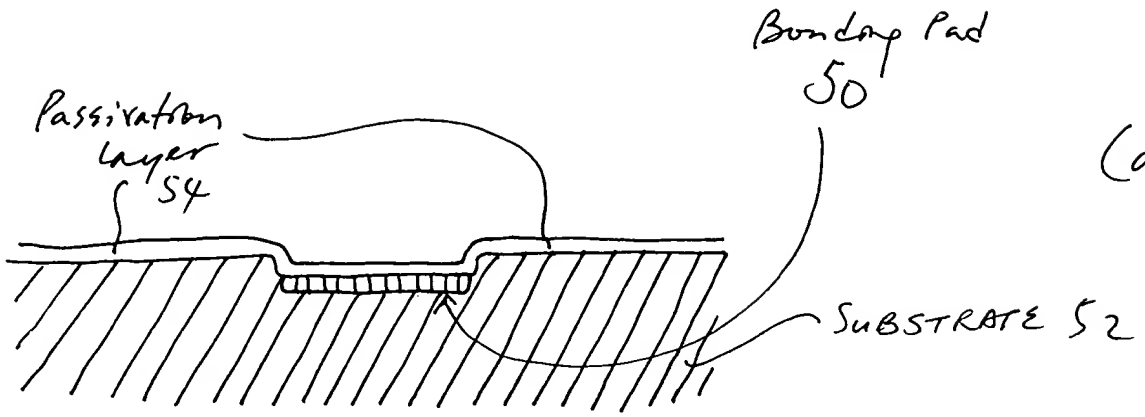

START
Form Substrate with Cu interconnect 401
Fabricate Cu bond pad 402
Deposit Ta layer 403
Pattern and etch Ta layer 404
Wedge bond onto Ta layer 405
Form $TaAl_3$ Compound 406
Form bond with substrate 407

FIGURE 4


Bonding Pad
50
Passivation
Layer
54
(a)
SUBSTRATE 52

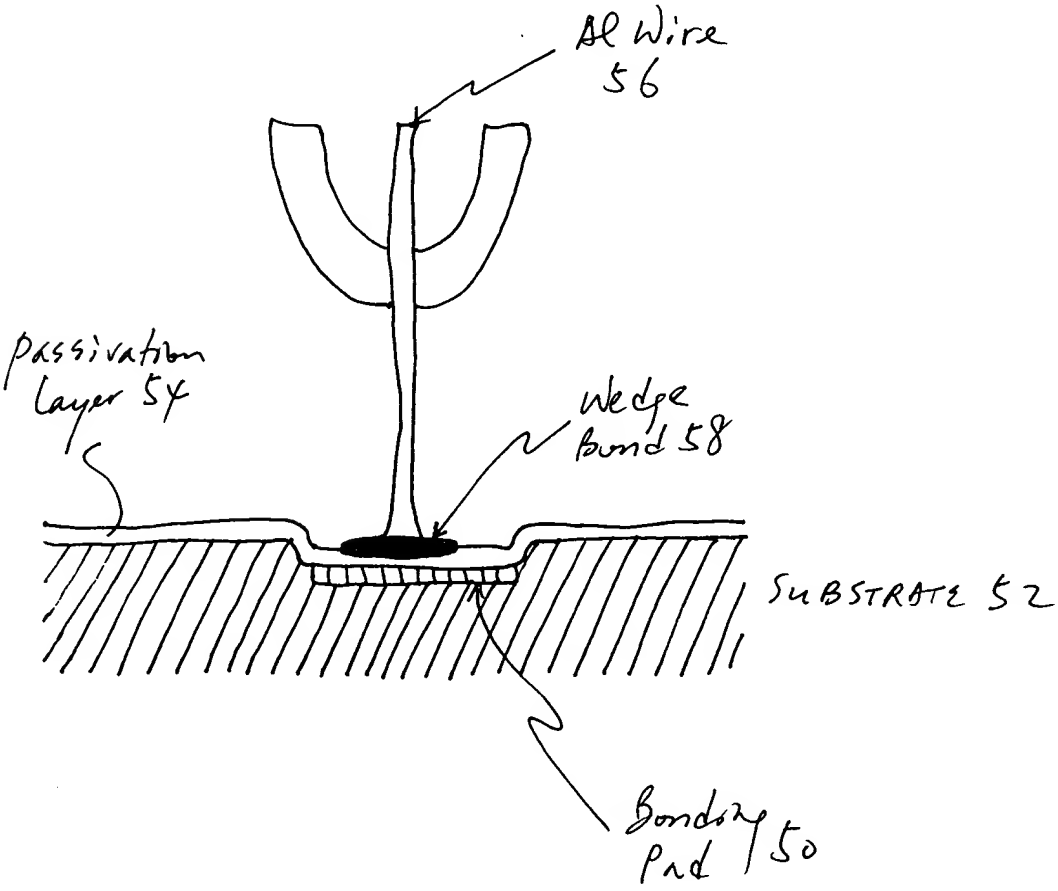

Al Wire
56
Passivation
Layer 54
Wedge
Bond 58
(b)
SUBSTRATE 52
Bonding
Pad 50

FIGURE 5